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Numerical Investigation of Semiconductor Ring Lasers With Two External Cavities

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We report results on the numerical analysis of the behaviour of a semiconductor ring laser under the influence of feedback from two external cavities. Double feedback arises naturally in a semiconductor ring laser, e.g. at the end facets of an outcoupling waveguide. We find that, under certain conditions, the system displays quasi-periodic and chaotic behavior.

Key Words semiconductor ring lasers, delayed optical feedback